FIG.1

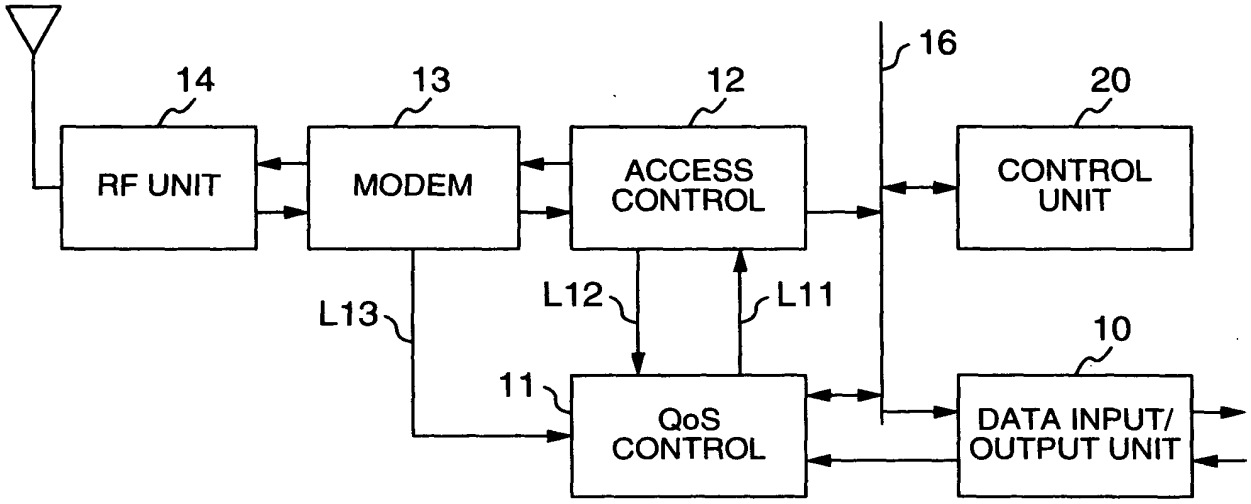

14
13
12
16
20
RF UNIT
MODEM
ACCESS CONTROL
CONTROL UNIT
L13
L12
L11
10
11
QoS CONTROL
DATA INPUT/ OUTPUT UNIT

FIG.2

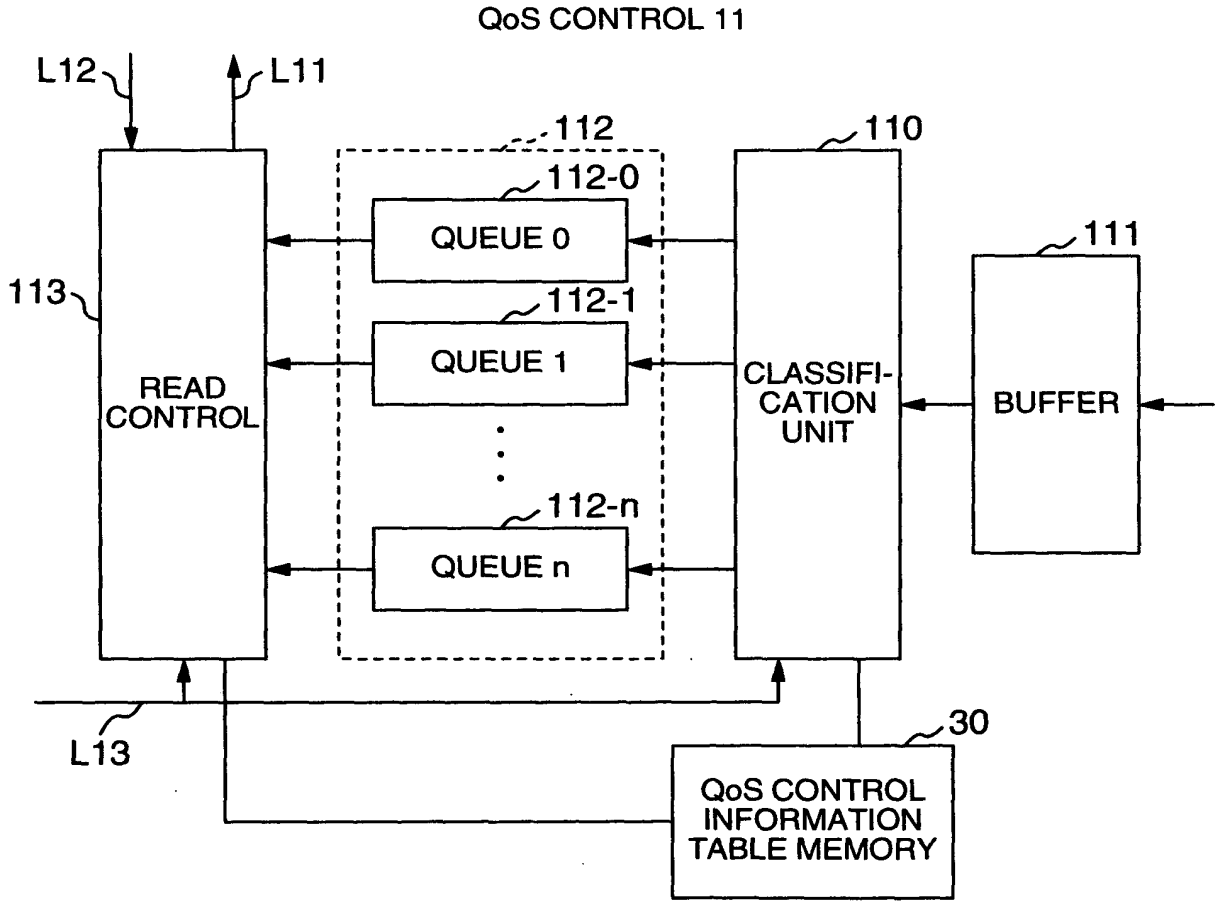

QoS CONTROL 11
L12
L11
112
110
112-0
QUEUE 0
111
113
112-1
QUEUE 1
READ CONTROL
CLASSIFI-CATION UNIT
BUFFER
112-n
QUEUE n
L13
30
QoS CONTROL INFORMATION TABLE MEMORY

FIG.3

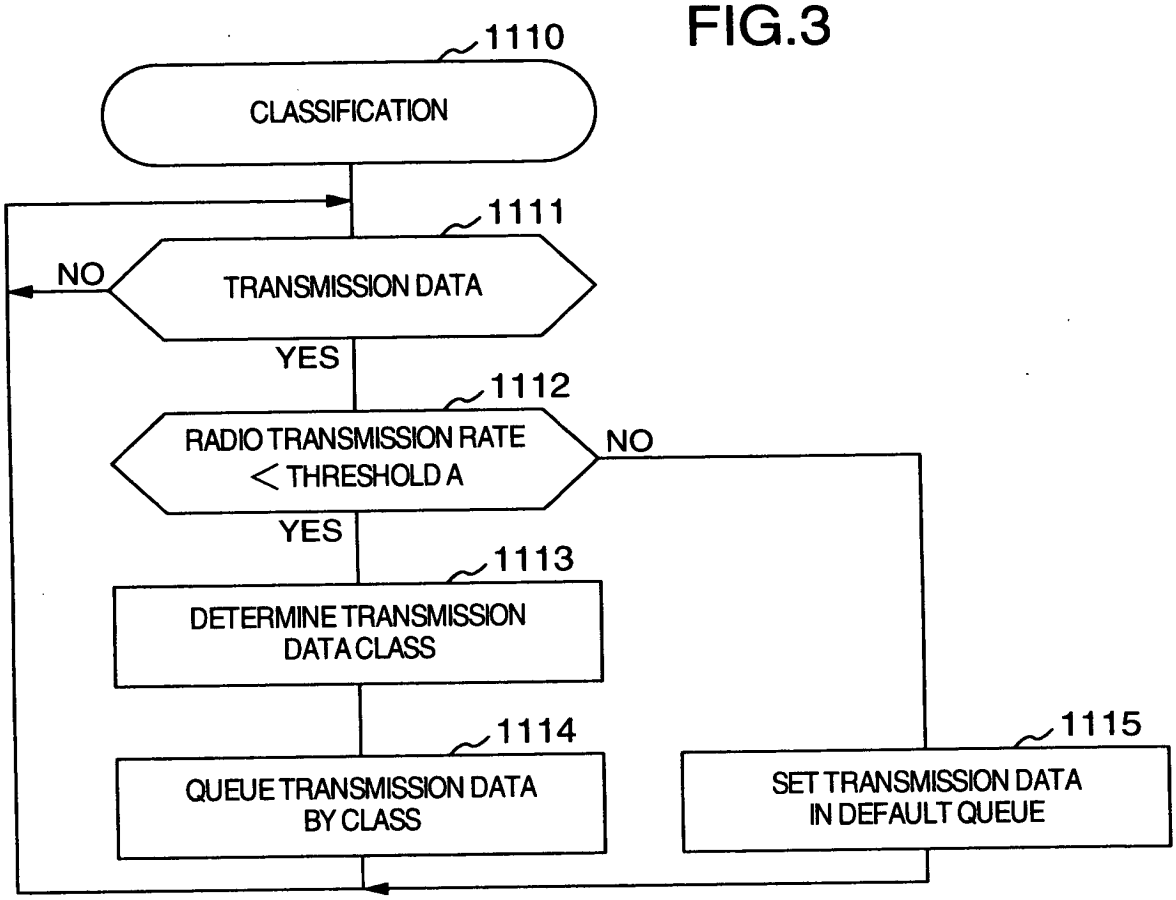

1110
CLASSIFICATION
1111
NO
TRANSMISSION DATA
YES
1112
RADIO TRANSMISSION RATE
< THRESHOLD A
NO
YES
1113
DETERMINE TRANSMISSION
DATA CLASS
1114
QUEUE TRANSMISSION DATA
BY CLASS
1115
SET TRANSMISSION DATA
IN DEFAULT QUEUE

FIG.4

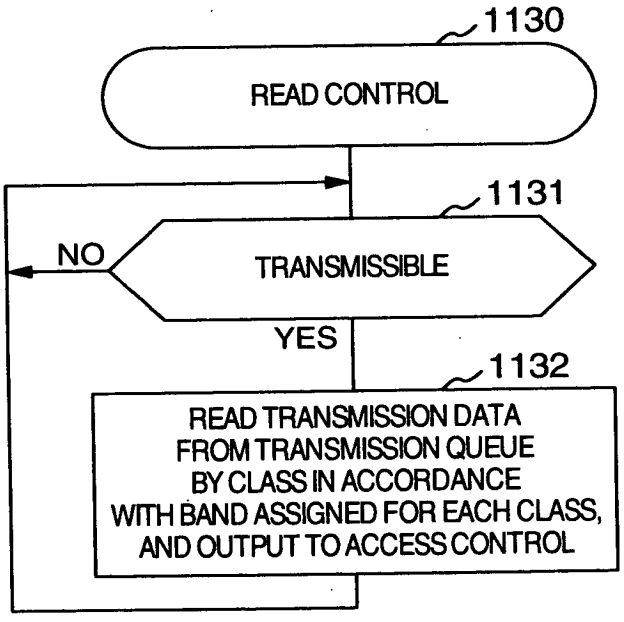

1130
READ CONTROL
1131
NO
TRANSMISSIBLE
YES
1132
READ TRANSMISSION DATA
FROM TRANSMISSION QUEUE
BY CLASS IN ACCORDANCE
WITH BAND ASSIGNED FOR EACH CLASS,
AND OUTPUT TO ACCESS CONTROL

FIG.5

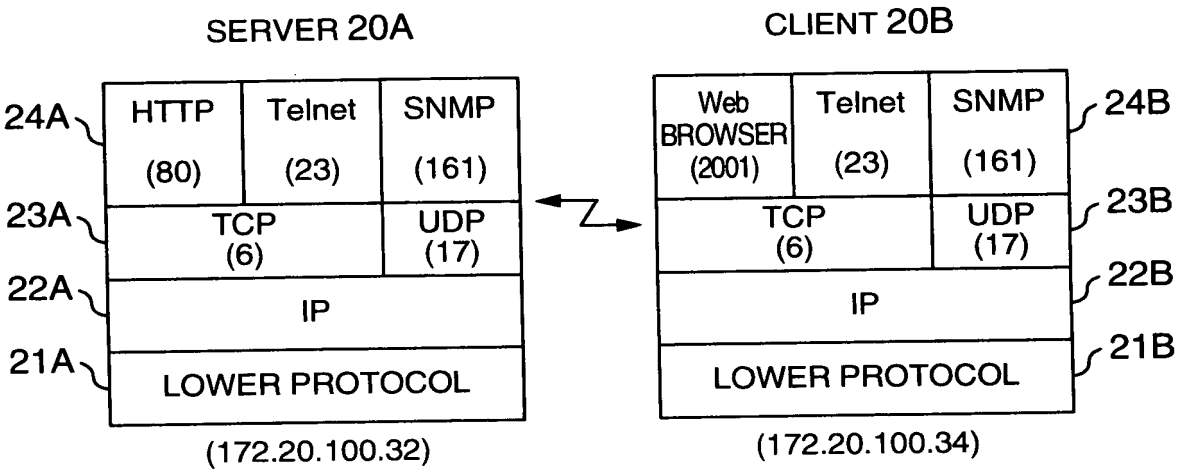

SERVER 20A
CLIENT 20B
24A
HTTP (80)
Telnet (23)
SNMP (161)
23A
TCP (6)
UDP (17)
22A
IP
21A
LOWER PROTOCOL
(172.20.100.32)
Web BROWSER (2001)
Telnet (23)
SNMP (161)
24B
TCP (6)
UDP (17)
23B
IP
22B
LOWER PROTOCOL
21B
(172.20.100.34)

FIG.6

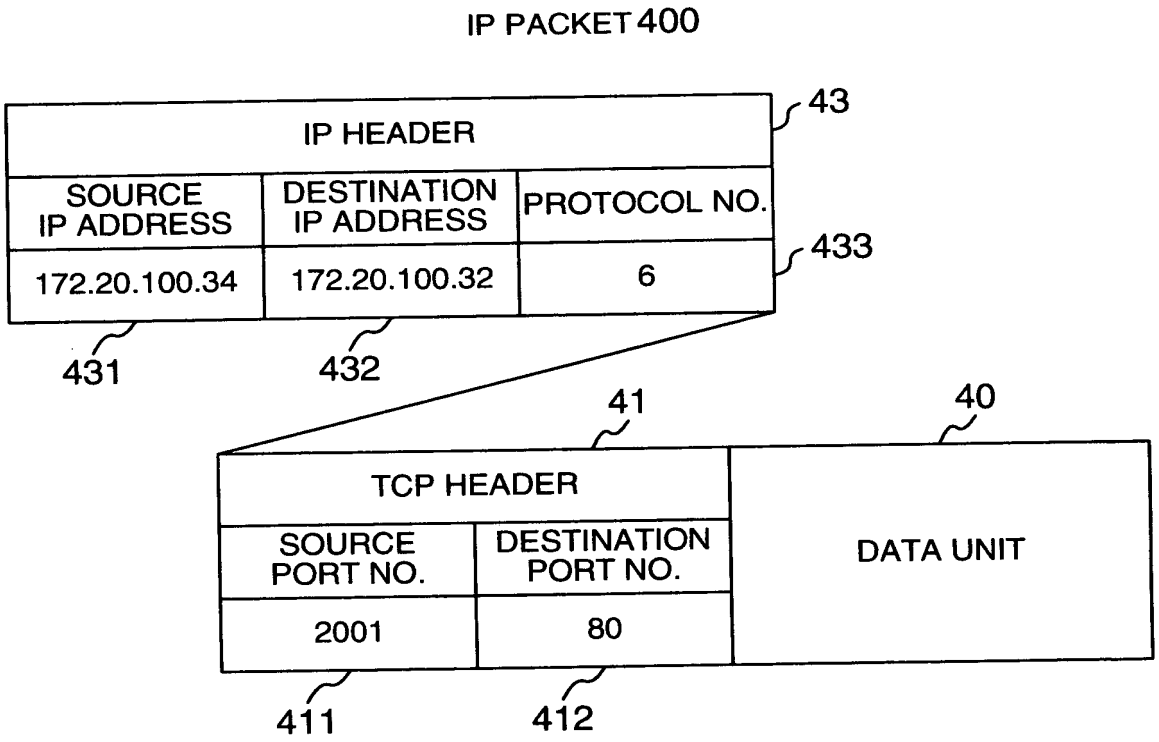

IP PACKET 400
IP HEADER
43
SOURCE IP ADDRESS
DESTINATION IP ADDRESS
PROTOCOL NO.
433
172.20.100.34
172.20.100.32
6
431
432
41
40
TCP HEADER
SOURCE PORT NO.
DESTINATION PORT NO.
DATA UNIT
2001
80
411
412

FIG.7

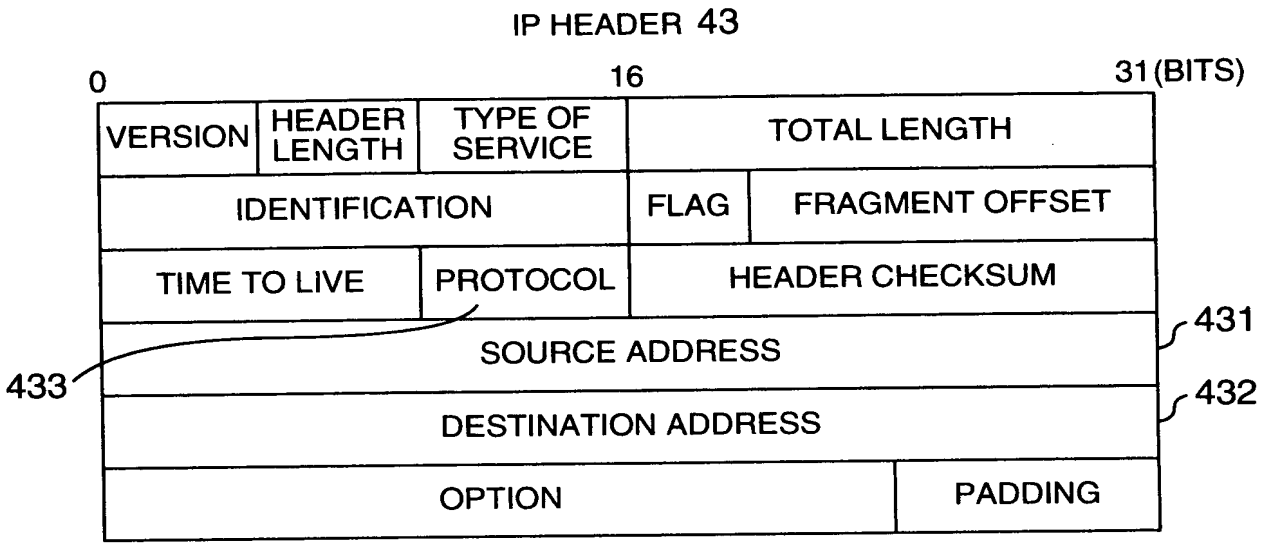

IP HEADER 43
0
16
31 (BITS)
VERSION
HEADER LENGTH
TYPE OF SERVICE
TOTAL LENGTH
IDENTIFICATION
FLAG
FRAGMENT OFFSET
TIME TO LIVE
PROTOCOL
HEADER CHECKSUM
SOURCE ADDRESS
DESTINATION ADDRESS
OPTION
PADDING
431
432
433

FIG.8

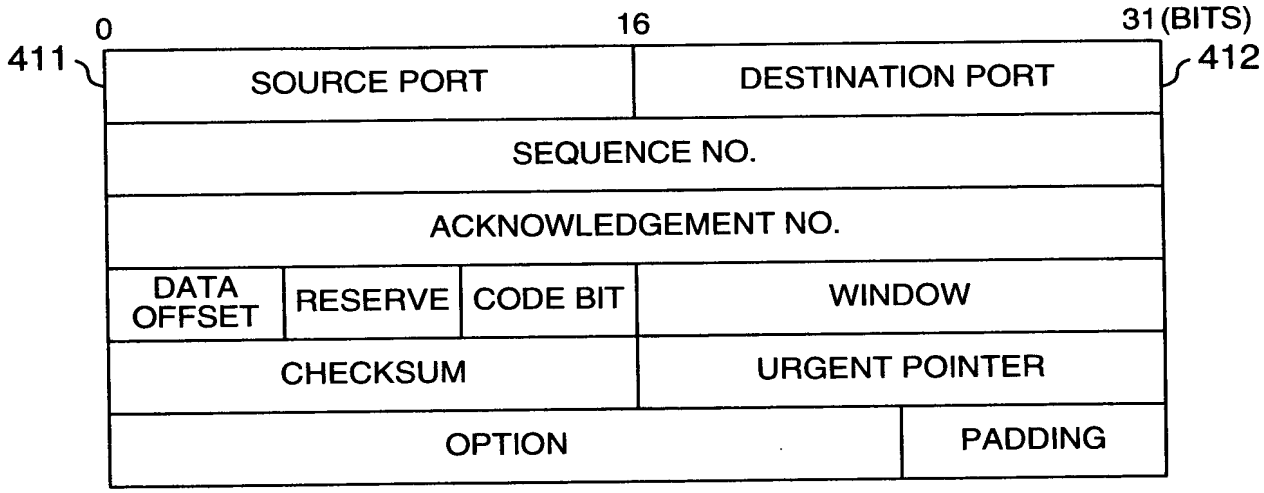

TCP HEADER 41
0
16
31 (BITS)
411
412
SOURCE PORT
DESTINATION PORT
SEQUENCE NO.
ACKNOWLEDGEMENT NO.
DATA OFFSET
RESERVE
CODE BIT
WINDOW
CHECKSUM
URGENT POINTER
OPTION
PADDING

FIG.9

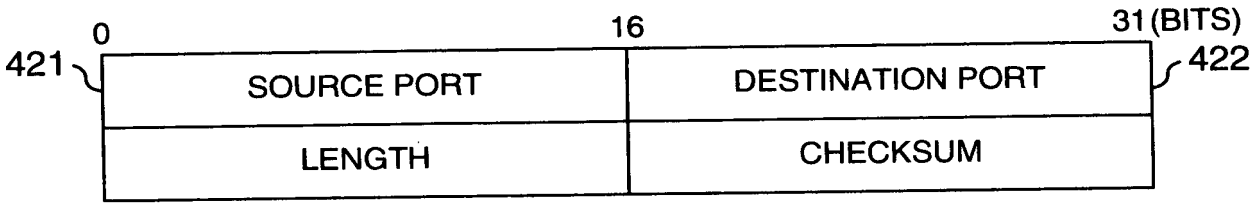


FIG.10

CLASSIFICATION TABLE 32
SHOWING CORRESPONDENCE TO PORT NO.

321 PORT NO.	322 CLASS
80	0
2050	3
2010	1
⋮	⋮

FIG.11

QoS CONTROL MODE TABLE 33

331 332

PRIORITY CONTROL	ENABLE BIT FLAG		
	X < B	B ≦ X < A	A ≦ X
「802.1D」	1	1	0
「PORT NO.」	0	1	0
「CONTROL POLICY A」	1	0	0
⋮	⋮	⋮	⋮

1 : YES
0 : NO

FIG.12

CONTROL POLICY A CLASSIFICATION TABLEF 34

341 342

PROTOCOL	SOURCE IP ADDRESS	DESTINATION IP ADDRESS	SOURCE PORT NO.	DESTINATION PORT NO.	SOURCE MAC ADDRESS	DESTINATION MAC ADDRESS	CLASS
—	—	—	—	—	11-22-33-00-00-01	—	3
—	—	—	—	—	11-22-33-00-00-02	—	3
—	—	—	80	—	—	—	7
⋮	⋮	⋮	⋮	⋮	⋮	⋮	⋮

FIG.13

IEEE802.1D PRIORITY CLASSIFICATION 31

311 TRAFFIC TYPE	312 PRIORITY (CLASS)
Background	1
Spare	2
Best Effort	0 (Default)
Excellent Effort	3
Controlled Load	4
Video	5
Voice	6
Network Control	7

FIG.14

CLASS-WISE BAND ASSIGNMENT TABLE 35

CLASS	GUARANTEED BAND
0	50 Mbit/s
1	5 Mbit/s
2	5 Mbit/s
3	5 Mbit/s
4	5 Mbit/s
5	10 Mbit/s
6	10 Mbit/s
7	5 Mbit/s

FIG.15

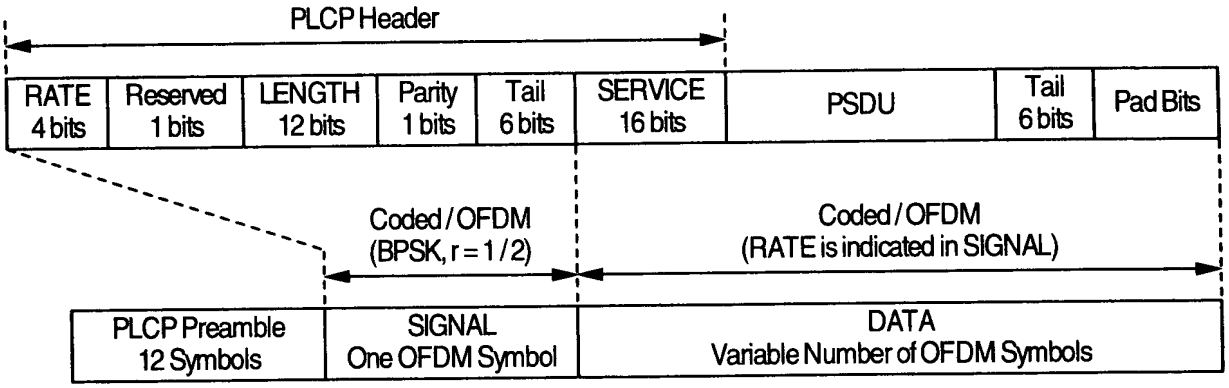

PLCP Header
RATE 4 bits
Reserved 1 bits
LENGTH 12 bits
Parity 1 bits
Tail 6 bits
SERVICE 16 bits
PSDU
Tail 6 bits
Pad Bits
Coded / OFDM (BPSK, r = 1/2)
Coded / OFDM (RATE is indicated in SIGNAL)
PLCP Preamble 12 Symbols
SIGNAL One OFDM Symbol
DATA Variable Number of OFDM Symbols

FIG.16

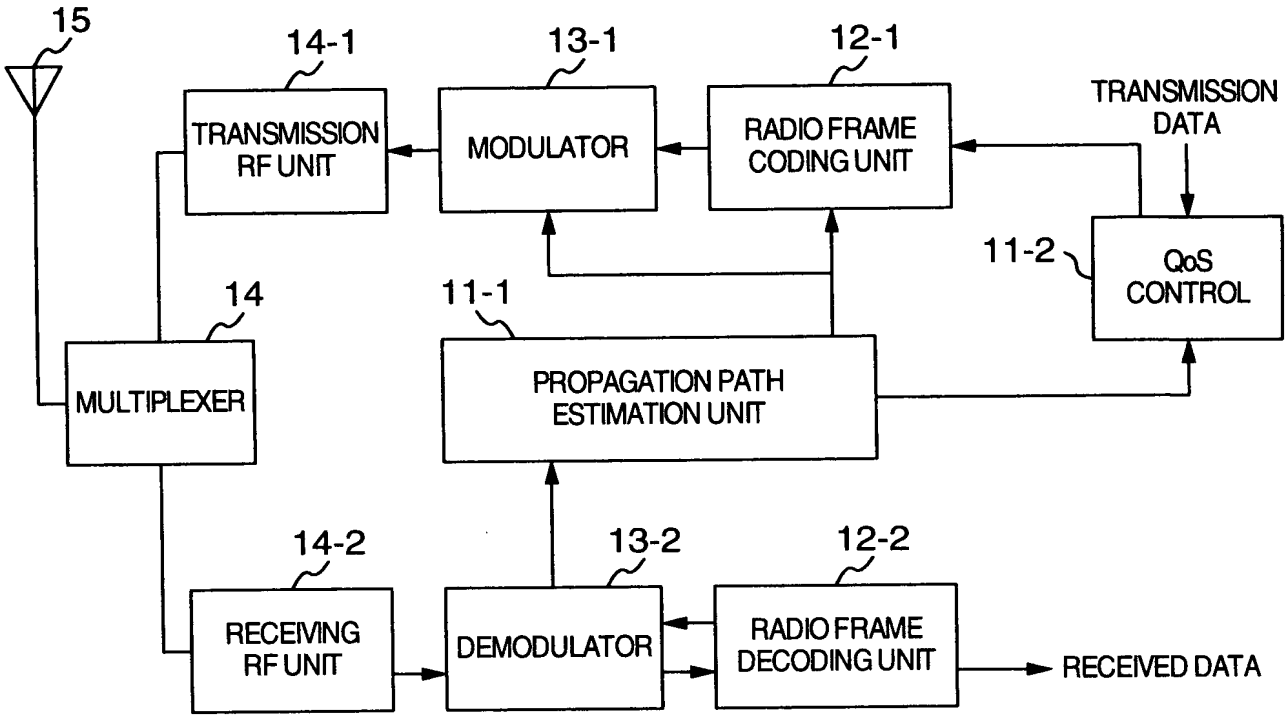

15
14-1
13-1
12-1
TRANSMISSION RF UNIT
MODULATOR
RADIO FRAME CODING UNIT
TRANSMISSION DATA
11-2
QoS CONTROL
14
11-1
MULTIPLEXER
PROPAGATION PATH ESTIMATION UNIT
14-2
13-2
12-2
RECEIVING RF UNIT
DEMODULATOR
RADIO FRAME DECODING UNIT
RECEIVED DATA

FIG.17

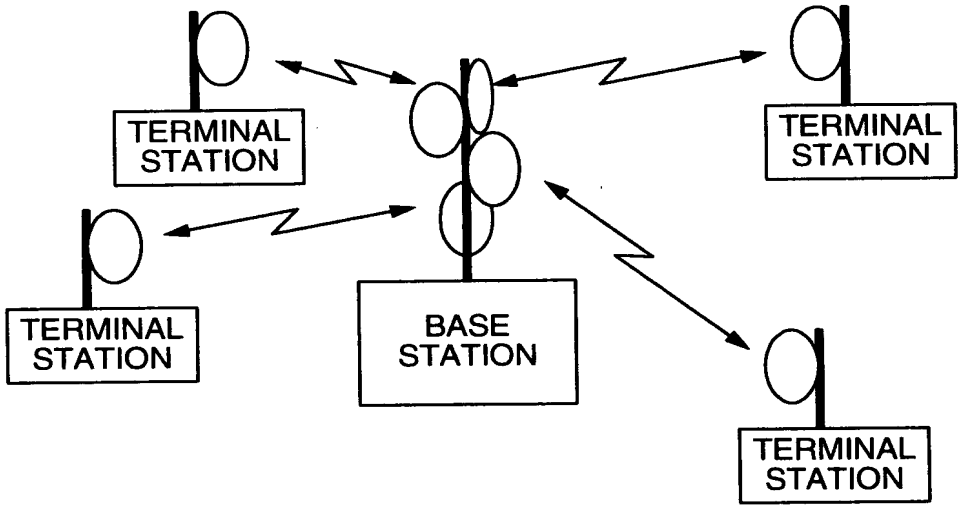

TERMINAL STATION
TERMINAL STATION
TERMINAL STATION
BASE STATION
TERMINAL STATION

FIG.18

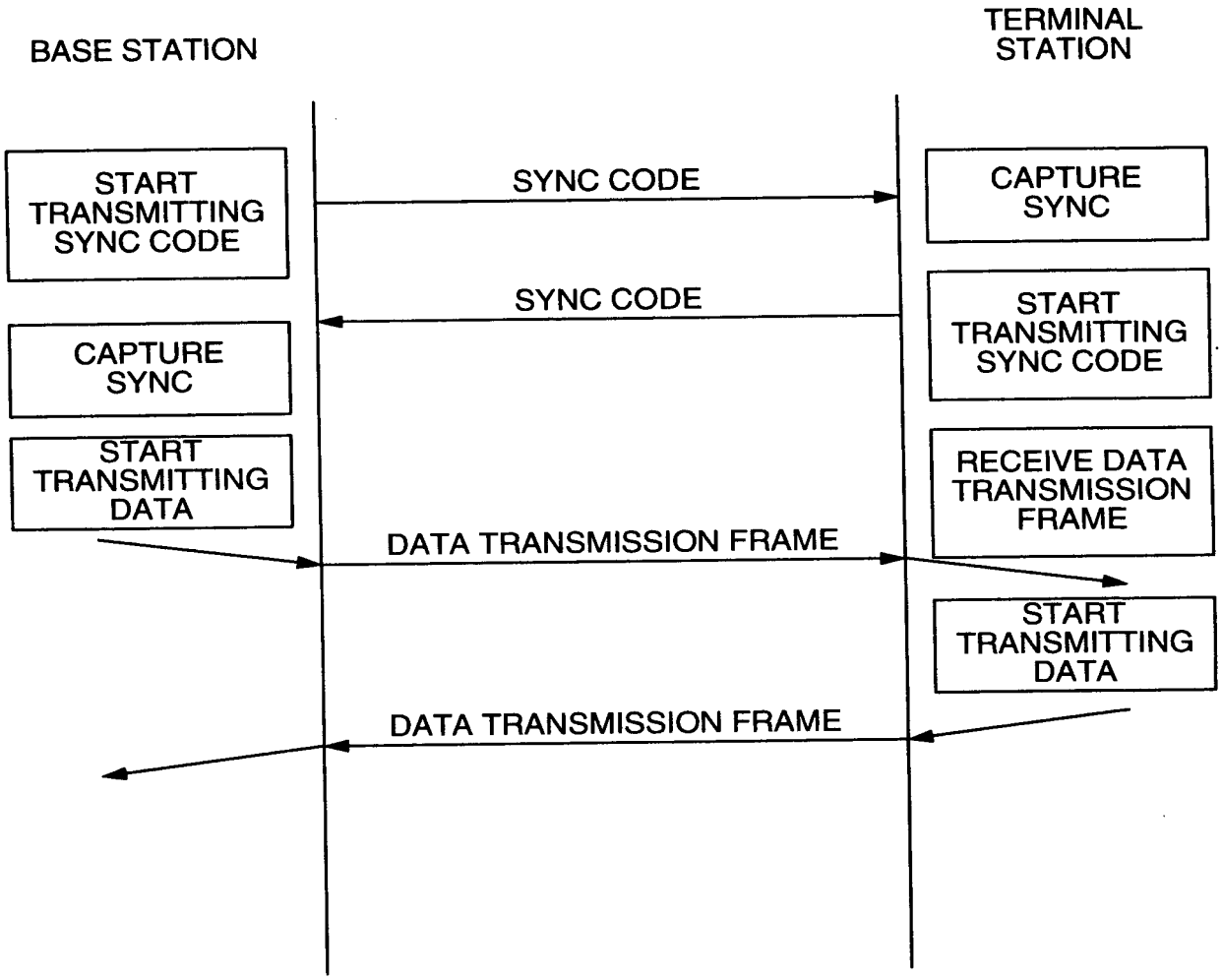
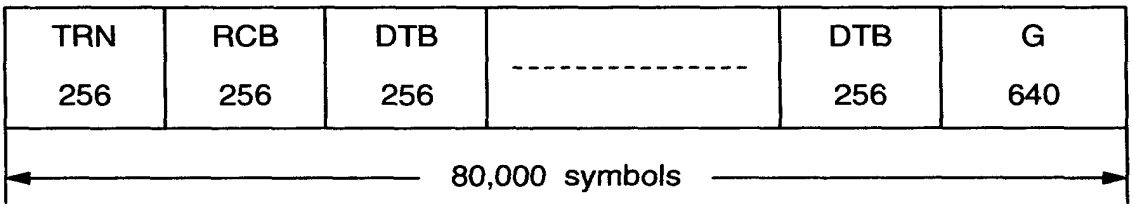

BASE STATION
TERMINAL STATION
START TRANSMITTING SYNC CODE
SYNC CODE
CAPTURE SYNC
SYNC CODE
START TRANSMITTING SYNC CODE
CAPTURE SYNC
START TRANSMITTING DATA
RECEIVE DATA TRANSMISSION FRAME
DATA TRANSMISSION FRAME
START TRANSMITTING DATA
DATA TRANSMISSION FRAME

FIG.19

RECEIVING SIGNAL LEVEL	MODULATION SCHEME	CODE	INFORMATION TRANSMISSION RATE
-60 dBm OR MORE	64QAM	3	100 Mbit/s
-67～-60dBm	16QAM	2	70 Mbit/s
-75～-67dBm	QPSK	1	35 Mbit/s
-75 dBm OR LESS	BPSK	0	17 Mbit/s

FIG.20A

DATA TRANSMISSION FRAME FORMAT



(NOTE) NUMERALS IN COLUMNS INDICATE SYMBOL NUMBER

FIG.20B

RCB CONFIGURATION

MODTYPE: 0: BPSK, 1: QPSK, 2: 16QAM, 3: 64QAM

FIG.20C

DTB CONFIGURATION